REMARKS / ARGUMENTS

Status of Claims

Claims 1, 8-19, 21-24, 27-28, 31-33, 38, 40-41, 43 and 47-49 are pending in the application and stand rejected. Of the pending claims, Applicant herein provides clarifying remarks, for consideration by the Examiner, to traverse the rejections. Applicant has also added new Claim 50, leaving Claims 1, 8-19, 21-24, 27-28, 31-33, 38, 40-41, 43 and 47-50, for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §103(a) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

Objections Under 35 U.S.C. §132

The Examiner has objected to Claim 47 because it allegedly introduces new matter arising from the language "unitary shell".

Applicant traverses this objection for the following reasons.

The mere inclusion of dictionary or art recognized definitions known at the time of filing an application would not be considered new matter. MPEP §2163.07.

A dictionary recognized definition of "unitary" is "of or relating to a unit". The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company. Published by Houghton Mifflin Company.

In respectful disagreement with the Examiner, Applicant submits that the term "unitary shell" does not introduce new matter as the term is merely a dictionary recognized alternative description to that depicted and described in the specification as originally filed.

At paragraphs [0021] and [0032], Applicant discloses a combined sensor shell 110 made of a molded insulative material that houses a current sensor 90 and a voltage sensor 100. Figures 2, 6, 9 and 12, depict combined sensor shell 110 as being a unit.

At paragraph [0033], Applicant discloses a combined sensor shell 110 comprising a current sensor cavity 126 and a voltage sensor cavity 128. Figures 6 and 12 depict combined sensor shell 110 as being a unit with cavities 126 and 128.

At Figures 6-12 and at paragraphs [0032-0039], Applicant depicts and describes a combined sensor shell 110 having alternative arrangements for a current sensor cavity 126 and a voltage sensor cavity 128. Figures 6 and 12 depict combined sensor shell 110 as being a unit with cavities 126 and 128.

At Figures 9-11 and at paragraphs [0036-0037], Applicant depicts and describes a combined sensor shell 110 having a first cross-section 10-10 (Figure 10) comprising a current sensor 90, and a second cross-section 11-11 (Figure 11) comprising a voltage sensor 100. Figure 9 depicts combined sensor shell 110 as being a unit with cross-sections 10-10 and 11-11.

At Figure 6, Applicant depicts a current sensor 90 (cross-section depicted in Figure 7) and a voltage sensor 100 (cross-section depicted in Figure 8) that are each a part of the unit depicted and described in the specification as originally filed as the combined sensor shell 110. Figure 6 depicts combined sensor shell 110 as being a unit with cavities 126 and 128, and with cross-sections 7-7 and 8-8.

At Figure 9, Applicant depicts a current sensor 90 (cross-section depicted in Figure 10) and a voltage sensor 100 (cross-section depicted in Figure 11) that are each a part of the unit depicted and described in the specification as originally filed as the combined sensor shell 110. Figure 9 depicts combined sensor shell 110 as being a unit with cross-sections 10-10 and 11-11.

At Figure 12, Applicant depicts a current sensor 90 and a voltage sensor 100 that are each a part of the unit depicted and described in the specification as originally filed as the combined sensor shell 110. Figure 12 depicts combined sensor shell 110 as being a unit with cavities 126 and 128.

In view of the foregoing, Applicant submits that the specification as originally filed clearly depicts and describes in such a manner that would be known to one skilled in the art a combined sensor shell 110 that is a unit comprising a current sensor 90 and a

voltage sensor 110. As such, the term "unitary shell" merely describes the "combined sensor shell" in alternative language that has a dictionary recognized definition where the combined sensor shell "relates to a unit" comprising current and voltage sensors.

These remarks are consistent with the remarks presented in Applicant's paper dated August 23, 2004, where Applicant provided specific reference to numeral 110 that represents the structure of the "unitary shell".

In light of the foregoing, Applicant respectfully submits that the language "unitary shell" constitutes the mere inclusion of a dictionary or art recognized definition that would have been known at the time of filing the application, and therefore does not constitute new matter. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw this objection, which Applicant considers to be traversed.

Rejections Under 35 U.S.C. §103(a)

Claims 1-46 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Engel et al. (U.S. Patent No. 5,600,527, hereinafter Engel) in combination with Clunn et al. (U.S. Patent No. 6,426,634, hereinafter Clunn) and further in combination with Bowyer et al. (U.S. Patent No. 5,804,953, hereinafter Bowyer) and Peterson et al. (U.S. Patent No. 5,420,799, hereinafter Peterson).

At the outset, while the Examiner cites "Chunn" et al. (U.S. Patent No. 6,426,634), Applicant understands the proper citation to be "Clunn" et al. (U.S. Patent No. 6,426,634).

In view thereof, Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

The Examiner broadly alleges that Engel teaches the disclosed invention, including a combined sensor shell (Figure 1, item 11). The Examiner does not reference Clunn, Bowyer or Peterson, for support in teaching the combined sensor shell. Paper 20040916, page 3.

In making this broad sweeping rejection, the Examiner has not stated with specificity where in Engel each and every element of the claimed may be found.

Specifically regarding Claim 1 and claims dependent therefrom, the Examiner has not shown with specificity where Engel teaches "said current sensor and said voltage sensor of said combined sensor shell disposed ***in signal communication with only one phase of the circuit breaker***; and said combined sensor shell ***placeable within the circuit breaker housing***."

Specifically regarding Claim 13 and claims dependent therefrom, the Examiner has not shown with specificity where Engel teaches "wherein said current sensor and said first voltage sensor are ***housed in a combined sensor shell*** and are ***in signal communication with only the one of the plurality of phases,*** said combined sensor shell ***disposed within said circuit breaker housing***."

Specifically regarding Claim 47 and claims dependent therefrom, the Examiner has not show with specificity where Engel teaches, "a ***unitary shell having a first portion and a second portion***, the unitary shell ***disposed within said housing*** proximate said current path; wherein said first portion comprises a current sensor for sensing current ***at only the one phase,*** said current sensor in signal communication with said electronic trip unit; wherein said second portion comprises a voltage sensor for sensing voltage ***at only the one phase,*** said voltage sensor in signal communication with said electronic trip unit; and wherein said current sensor, said voltage sensor and said unitary shell are all disposed ***for signal communication with only the one phase of the multiphase circuit breaker.***"

Dependent claims inherit all of the limitations of the respective parent claim.

The Examiner references Engel at Figure 1, item 11, for support of a combined sensor shell. Paper 20040916, page 3.

Applicant respectfully disagrees with the Examiner.

At Figure 1 and column 3, lines 32-50, Applicant finds Engel to disclose a circuit breaker 1 having a ranging circuit 11 (not a combined sensor shell as alleged by the Examiner) that converts the current and voltage signals to a suitable range for conversion by analog to digital converter 13 for input to a digital processor 15. Circuit breaker 1 also includes current transformers 7A, B, C, N and G, for sensing current flowing in each of three phase conductors 5A, B, C, N and G, and potential transformers 9A, B and C, for sensing phase to neutral voltages in the phase conductors.

The Examiner has not shown, and Applicant does not find, where Engel teaches item 11 to be both a ranging circuit and a combined sensor shell, where the combined sensor shell comprises a current sensor for sensing current ***at only one phase*** and a voltage sensor for sensing voltage ***at the only one phase*** of a circuit breaker, as claimed in the instant invention.

As disclosed in Engel, item 11 (ranging circuit) is disposed for sensing current and voltage in ***all phases*** of the circuit breaker 1 (Figure 1). Additionally, item 11 (ranging circuit) is not disclosed in Engel as comprising a current sensor and a voltage sensor. Quite to the contrary, Engel discloses at Figure 1, item 11 (ranging circuit) being in signal communication with, ***but distinctly separate from***, current transformers 7A, B, C, N and G, and potential transformers 9A, B and C. Furthermore, Engel discloses item 11 (ranging circuit) to be in signal communication with five current transformers 7A, B, C, N and G, and three potential transformers 9A, B and C (Figure 1), which is substantially different from the instant invention that claims a combined sensor shell 110 having a single current sensor 90 and a single voltage sensor 100.

In view of the foregoing, Applicant submits that Engel does not teach each and every element of the claimed invention, and discloses a substantially different invention to the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness.

Regarding Claims 24, 38 and 41, and claims dependent therefrom, the Examiner states that Engel does not disclose "the utilization of the technique for a detachable configuration", and looks to Clunn (claim 33) to cure this deficiency. Paper 20040916, page 3.

At the outset, Applicant respectfully submits that the claimed invention is not directed to "the utilization of a technique for a detachable configuration" where "technique" implies a method, but rather is directed to the structural element of a detachable configuration ***plug***. As claimed, Applicant is claiming a plug that is a configuration plug, where the configuration plug is detachable, hence, a detachable configuration plug, as depicted by reference numeral 124 in Figures 1 and 3-5. As such, Applicant is claiming the structure defined as a detachable configuration plug, not the utilization of a technique for a detachable configuration. In making this rejection without reference the structure of a detachable configuration plug, Applicant submits that the Examiner has not considered all elements of the claimed invention.

In comparing Clunn with the instant invention, Applicant finds Clunn at claim 33 as referenced, to be teaching a method wherein the step of running a self-test comprises the step of exiting the self-test if any one of a select group of operations is in process wherein the select group of operations includes one or more operations from the group including the separable contacts have opened, an arc detection is in process or a ground fault detection is in process.

In accordance with the explicit language of claim 33 itself, Applicant does not find any mention of a ***detachable configuration plug***, as claimed in the instant invention, and the Examiner has not stated with specificity where in Clunn such a plug may be found.

If Applicant assumes that the language "separable contacts" of claim 33 is intended by the Examiner to refer to a "technique for a detachable configuration", then Clunn wholeheartedly falls short of teaching a ***detachable configuration plug***, as claimed, since one skilled in the art of circuit breakers would not recognize the detachable

configuration plug, as claimed, as being equivalent to a set of separable contacts in a line conductor, as disclosed in Clunn.

Accordingly, Applicant submits that Engel does not teach a detachable configuration plug, and that Clunn fails to cure this deficiency. Dependent claims inherit all of the limitations of the respective parent claim.

In view of the foregoing, Applicant submits that Engel and Clunn do not teach each and every element of the claimed invention, and disclose a substantially different invention to the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness.

Further regarding Claims 24, 38 and 41, and claims dependent therefrom, the Examiner acknowledges that Engel does not disclose a voltage divider and a wye or delta configuration selection, and looks to Peterson (Figure 14A) and Bowyer (Abstract, line 1-20), respectively, to cure these deficiencies. Paper 20040916, page 3.

The Examiner does not look to Peterson or Bowyer to cure the deficiency of a detachable configuration plug, and Applicant submits that Peterson and Bowyer each fail to cure this deficiency.

Accordingly, and for all of the reasons set forth above regarding Clunn, Applicant submits that the combination of Engel, Clunn, Peterson and Bowyer, fail to teach each and every element of the claimed invention, and disclose a substantially different invention to the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness.

While the Examiner has suggested that the combination of references disclose the claimed invention, the Examiner has not stated with any degree of specificity where in the combination ***all*** such elements may be found. Accordingly, Applicant respectfully submits that the Examiner has not met the burden of showing a prima facie case of obviousness.

In view of the foregoing remarks, Applicant submits that the references fail to teach or suggest each and every element of the claimed invention and disclose a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

Regarding New Claim 50

Applicant has added new Claim 50 directed to a multiphase circuit breaker 20 having a sensor shell 110 having a first cavity 126 comprising a current sensor 90 and a second cavity 128 comprising a voltage sensor 100, wherein the current sensor, the voltage sensor, and the sensor shell, are all disposed for signal communication with only one phase of the circuit breaker.

Support for the subject matter of Claim 50 is provided in the specification and drawings as originally filed at paragraph [0038] and Figure 12. No new matter has been added.

In view of the foregoing remarks, Applicant respectfully submits that new Claim 50 is directed to allowable subject and respectfully requests entry and notice of allowance thereof.

The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 06-1130.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above identified Deposit Account.

Respectfully submitted,

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